

REMARKS/ARGUMENTS

I. Introduction:

Claims 1, 19, 20, and 23 are amended herein. Claim 10 was previously canceled. Claims 1-9 and 11-29 are currently pending.

II. Claim Rejections - 35 U.S.C. 103:

Claims 1-9 and 11-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,219,703 (Nguyen et al.) in view of U.S. Patent No. 5,913,037 (Spofford).

Applicants' invention, as set forth in the claims, is particularly advantageous in that the management station instructs an agent which objects to send for each notification and the order of the notifications so that notifications can be easily specified and reconfigured by a management station, thus providing increased flexibility. This allows system administrators to tailor notifications to meet specific needs of a network.

Applicants respectfully submit that claim 1 is patentable over Nguyen et al. and Spofford et al., which do not show or suggest sending a message to an agent specifying objects to include in each notification and the order of the objects.

The Nguyen et al. patent discloses a method and apparatus for constructing a device Management Information Base (MIB) in a Network Management Station (NMS). The device provides an agent, which includes a management structure MIB having data describing a device MIB structure supported by the device. The NMS includes an application which interprets data of the management structure MIB and constructs the device MIB. As shown in Fig. 1, the NMS includes device MIBs and a discovery application. The devices (or agents) each include a management structure MIB. The discovery application detects that a device is present on the network and accesses the management structure MIB to obtain data describing the device MIB structure. Fig. 2 illustrates contents of a management structure MIB, which includes a

standard list of MIB objects 208. A process of the invention is shown in Fig. 5. The NMS retrieves a list of standard MIBs and objects supported by the device using a conventional SNMP GET-NEXT command over the standard MIB table (steps 508 and 512). The NMS accesses the management structure MIB using conventional SNMP communications through a conventional communications link. The NMS then constructs a MIB for managing the device and loads it into the memory of the NMS.

Nguyen et al. are concerned with constructing an MIB in a management station so that the management station can use the MIB to manage a device. The management station uses information from a device MIB to construct its MIB. The management station does not specify to the agents which objects to include in each notification or the order of the objects, as required by claim 1.

The Spofford et al. patent is directed to a dynamic management information base manager for dynamically managing a tree of SNMP data objects identified by a standard object identifier along with each object's value. An agent uses the interface of the MIB manager to add and delete MIB objects by OID. The management station sends conventional SNMP requests, such as "get", "getnext" or "set" to a management module of a network device. An agent uses the interface of the MIB manager to add and delete MIB objects and provides references to subroutines which operate to manage the identified by objects by controlling the objects' value. This allows the MIB manager to be implemented in a manner independent of the application and hardware.

In rejecting claim 1, the Examiner refers to Fig. 4 of the Spofford et al. patent, which shows a network device configured for dynamically modifying its internal MIB. Spofford et al. are concerned only with managing an internal management information base and do not address sending or receiving requests for notifications or any details of notifications supported or objects defined by the notifications. Conventional systems, such as those described in Nguyen et al. and Spofford et al., have drawbacks in that newer versions of MIBs may result in new objects being added to notifications. In fact, Spofford et al. specifically disclose modifying the structure of an MIB and thus create the problem addressed by applicants' invention. If the information maintained by and

transmitted between agents and the management stations differ it is difficult for the management station to interpret the notifications received from the agents.

In Response to Arguments section of the Office Action dated February 23, 2006, the Examiner refers to Col. 10, lines 51 – col. 11, line 12. This portion of the patent simply describes how the management station sends conventional requests which include OIDs to one or more objects to be read or modified. The agent executes functions in response to the SNMP requests, such as query, modify, to retrieve or modify the information as desired. For example, for a get operation, the MIB manager modifies the object values as requested. The Examiner also refers to Fig. 5A, which illustrates a standard MIB-II structure and Fig. 5C, which illustrates a modified MIB including MIB-II combined with RMON (remote network monitoring) MIB. Fig. 5C thus illustrates the addition of objects (or a new MIB) in an existing tree structure. As noted, above, modification of an MIB without modifying notifications creates problems addressed by applicants' invention.

Furthermore, even assuming for the sake of discussion, that one would look to Spofford et al. to modify Nguyen et al., this would not necessarily lead to applicants' invention. The agent of Spofford et al. does not modify the MIB structure (or notifications) based on input from a management station. The MIB manager, which modifies the MIB at the agent, adds a new object to the MIB structure in response to a request by the agent and according to the definition within the agent of the new object (see, for example, col. 3, lines 30-35 and col. 12, lines 42-52). The agent thus controls the MIB structure, which is modified based on changes at the agent. In contrast, applicant's invention sends a query from a management station to an agent for a list of notifications that it supports and the management station then instructs the agent which objects to include in its notifications. The notifications generated at the agent are thus modified based on instructions from the management station.

Accordingly, claim 1 is submitted as patentable over Nguyen et al. and Spofford et al. Claims 2-9, 11-13, and claims 24-29, are submitted as patentable for the same reasons as claim 1.

Claims 14 and 19 are directed to a computer program product and system, respectively, for configuring contents of a network management notification, and are submitted as patentable for the reasons discussed above with respect to claim 1.

Claims 15-17, depending directly from claim 14, are submitted as patentable for the same reasons as claim 14.

Claim 18 is directed to a system comprising a processor that receives information specifying contents of notifications supported by an agent at a management station and sends instructions from the management station to the agent to modify the contents of the notification to a preferred configuration. Claim 18 is submitted as patentable for the reasons discussed above with respect to claim 1.

Claim 20 is directed to a method for sending SNMP notifications from an agent to a management station and includes receiving a message from the management station specifying objects for notifications supported by the agent, modifying a list of objects for the notifications and including selected objects in a specified order, and sending a notification containing the specified objects in the specified order upon occurrence of an event. As discussed above, Nguyen et al. simply provide a method for sending MIB information from an agent to a management station and creating an MIB at the management station for managing the agent. Nguyen et al. do not disclose receiving a message from a management station which specifies objects to include in notifications it sends to the management station or modifying a list of objects for notifications to include, as set forth in claim 20.

Accordingly, claim 20 and claims 21-22, depending either directly or indirectly therefrom, are submitted as patentable over Nguyen et al. and Spofford et al.

Claim 23 is directed to a system for sending SNMP notifications from an agent to a management station and is submitted as patentable for the reasons discussed above with respect to claim 20.

Claims 24-29 have not been addressed by the Examiner and are submitted as patentable over the prior art of record.

IV. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,



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